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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/506,172	02/17/2000	Amir Doron	10992208-1	7328

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EXAMINER

ROGERS, SCOTT A

ART UNIT PAPER NUMBER

2626

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/506,172

Applicant(s)

DORON, AMIR

Examiner

Scott A Rogers

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7 and 8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 7-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

In view of the amendment filed June 7, 2004, the objection to claims 6-7 under 37 CFR § 1.75(a) is withdrawn.

Applicant's arguments filed June 7, 2004, with respect to the rejection of claims 6-7 under 35 U.S.C. 103(a), have been fully considered but they are not persuasive.

Applicant argues that the examiner has not cited any motivation set forth in Eschbach or in knowledge generally available to one of ordinary skill in the art, to modify the admitted prior art as proposed and the examiner has simply made a conclusionary statement that the error diffusion technique of Eschbach initially determines the best fit super pixel cell and propagates a minimized halftone error in order to maintain gray density. Further, applicant argues that the purpose of his apparatus is to reduce the average error value in an error diffusion scheme, not to maintain gray density as sought by Eschbach.

The examiner disagrees. Eschbach specifically states that "the average output gray value is compared to the average modified input gray value, to determine a input/output difference [and this] input/output difference controls the threshold value, so that the threshold is set to attempt to maintain gray density equal between the input image and the output image" (col. 3, line 66 to col. 4, line 3). Eschbach states that the average output gray value is compared to the average modified input gray value, to determine an input/output difference and this difference controls the threshold value (col. 3, lines 66-68). In effect, this control or selection of the threshold value results in the assigned output values being selected such that the average of these output values

is as close as possible to the input value. Reducing the average error value in an error diffusion scheme is what Eschbach is doing to maintain gray density equality, or best fit, between input and output images (see col. 3, lines 33-37). And this is the motivation to combine Eschbach with the admitted prior art.

Applicant further argues that one of ordinary skill in the art would not have had a reasonable expectation of success in seeking to modify the admitted prior art in view of Eschbach given the extreme complexity of adapting the halftoning with error feedback approach of Eschbach to accommodate color space conversion.

The examiner disagrees. The operation performed in Eschbach when performed in a color space conversion process would merely be performed on each color component as contemplated by Eschbach in the last paragraph of col. 8 and lines 2-10 of col. 8.

Finally, applicant argues that even assuming that the admitted prior art were modified in light of Eschbach as proposed by the examiner, the result would still not be the invention of claim 6 because Eschbach contemplates calculation of an error between the average gray value of the original image and the average gray value of the output image, and forwarding preselected fractions of the error to unprocessed pixels belonging to a preselected set of unprocessed halftone cells (see col. 4, lines 3-8 of Eschbach) which is a radically different error feedback approach and does not result in the final limitation of amended claim 6.

The examiner disagrees. The portion of Eschbach which applicant refers to is only what Eschbach does with the error between the average gray value of the original

image and output image. As stated above, Eschbach also uses this input/output difference of average gray values to control the threshold value, so that the threshold is set to attempt to maintain gray density equal between the input image and the output image (col. 3, line 66 to col. 4, line 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Eschbach (US5243443) as set forth in the Office Action mailed February 12, 2004.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Rogers whose telephone number is 703-305-4726. The examiner can normally be reached on Monday-Thursday 6:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on 305-4863.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at 703-306-0377. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SCOTT ROGERS
PRIMARY EXAMINER

September 20, 2004